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ABSTRACT

Social support has been considered an important coping resource moderating the stress associated with physical illness and disability. The role of social support as a buffering agent for stressful life events inherent in physical illness and disability was examined in 78 individuals with spinal cord injury, residing in community settings in Upstate New York. Subjects were administered the Interpersonal Support Evaluation List (ISEL); the Critical Life Events Questionnaire; and two adjustment measures, the Beck Depression Inventory and the SCI Adjustment Scale. The ISEL was factor analyzed to provide a support specific measure. Overall, six indices of stress were developed. One index assessed global stress and one assessed stress specific to spinal injuries. The remaining four indices measured support-specific stressors corresponding to the four functions of social support (tangible, appraisal, belonging, self-esteem). A total of 14 combinations of stress indices and social support scales were regressed onto the two adjustment measures, resulting in 28 regression equations. Significant interactions were found for instrumental forms of support (tangible and appraisal) while emotional forms of social support (belonging and self-esteem) were found to have a direct impact on adjustment. Scales including general stressors not specific to disability yielded more stress buffering effects. These results suggest important clinical and theoretical directions for future explorations of the structure and role of social support and its interactive nature with stressful events experienced by individuals with spinal cord injuries who live in the community. (Author/NB)

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Social Support, Stress, and Adjustment to Spinal Cord Injury

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Abstract

The role of social support as a buffering agent for stressful life events inherent in physical illness and disability is examined. A sample of 78 individuals with spinal cord injury, residing in community settings were administered the Interpersonal Support Evaluation List (ISEL), a combined index of stressful life events, and two measures of adjustment (Beck Depression Inventory and SCI Adjustment Scale). The ISEL was factor analyzed to provide a support specific measure. Overall, six indices of stress were developed: one index assessed global stress, another stress specific to spinal injuries, and four indices measured support specific stressors corresponding to the four functions of social support. A total of 14 combinations of stress indices and social support scales were regressed onto the two adjustment measures, resulting in 28 regression equations. Significant interactions were found for instrumental forms of support (tangible and appraisal) while emotional forms of social support (belonging and self-esteem) were found to have a direct impact on adjustment. Scales including general stressors not specific to disability yielded more stress buffering effects. Results are discussed in the context of how persons with spinal injuries adjust to community living.

Social Support, Stress, and Adjustment to Spinal Cord Injury

Social suppoort has been considered an important coping resource moderating the stress associated with physical illness and disability (DiMatteo & Hays, 1981; Levin & Turner, 1981). Stress and adjustment outcomes have generally been studied in the context of acute life events having clearly delimited time referents. Less attention has been given to studying the role of social support in mediating the chronic stressors associated with life changes effected by a permanent, traumatic injury. The present study examines the buffering functions of social support with various types of stressful life events experienced by individuals with spinal cord injuries.

Many investigations in the literature on spinal cord injury have focused narrowly on the adjustment process during the period of initial hospitalization (Woodbury, 1978). Less is known about adjustment processes important to community living. Schultz and Decker (1985) found that a sample of individuals with SCI, 20 years post injury, closely approximated able-bodied adults in adjustment. Other studies (e.g., Dew, Lynch, Ernst, & Rosenthal, 1983; Richards, 1983) note a significant amount of change for individuals in the several years immediately following hospital discharge. The present study focuses on adjustment during the periods of reentry and establishment into community living characterizing the life situation of the majority of individuals with a spinal cord injury. By sampling individuals in the community, this study provides an important focus on the nature of stress endemic to community living and on the expected stress reducing role afforded by social support functions.

Traditionally, functional accounts of assistance, such as size of social network, have been used to assess social support. Indices developed to

assess social networks have been based on the notion that social support is a global construct. More recent research has focused on differentiating the ~ functional aspects of social support, typically into areas of emotional, informational, and material aid (Kahn 1979).

Two general, not necessarily mutually exclusive, models of the role of social support in facilitating adjustment to chronic disability are examined in the present study. Most previous rehabilitation literature has considered the roles of stress and of social support in adjustment processes independently of one another, without taking into account their potentially interactive effects. This approach, the "main effects" model, proposes that social support has a beneficial effect without respect to the level of stress experienced (e.g. Aneshensel and Stone, 1982; Schaefer, Coyne and Lazarus, 1981). The function of social support in this sense may be its facilitation of self-concept integration for the SCI person. DeLoach and Greer (1981) describe this as a process of "stigma incorporation" during which aspects of the physically disabled self become merged with an integral part of the preexisting self-state.

The second model, the buffering model, posits that social support buffers people from the potentially pathogenic influence of stressful events. In this model, the importance of social support in the adjustment process increases as the level of stress increases (e.g., Cohen & Hoberman, 1983; Wilcox, 1981). Stress-buffering models describe interactive or multiplicative effects in which two or more conditions must be present; together they set off a process that neither alone could produce. An appropriate model might then emphasize the problems of fit between a context of highly stressful events during adjustment and the available social support to counteract the impact of experienced stress.

The stress-buffering hypothesis is most closely allied with

vulnerability theories of stress in which types of social support, defined as vulnerability factors, are understood to operate only in conjunction with stress. Social support functions are expected to alleviate the burden of highly stressed individuals and to be irrelevant to the situation of those with relatively low levels of stress. Seen in this moderator role, while the level of social support is not necessarily responsive to the amount of stress experienced, social support functions are especially potent under highly stressful conditions.

Therapeutic efforts consistent with this notion have been built around the client's particular areas of vulnerability and available social support. One illustration is Dunn, Van Horn, & Herman's (1981) social skills training approach, which isolates a set of socially stressful situations commonly experienced by individuals with spinal cord injury and trains them in compensatory coping strategies.

In a comprehensive review, Cohen and Wills (1985) concluded that there is equivocal evidence for the stress buffering role of social support with nondisabled samples. Several reviewers, however, have suggested that buffering effects are masked by a failure to appropriately differentiate and link types of social support with the specific contexts for which they may be most efficacious (Cohen & McKay, 1984; Cohen & Wills, 1985; Wood, 1984). This would suggest the importance of studying how the utilitarian and social integrative functions of social support may buffer the stress of living in the community with a spinal cord injury. Understanding the specific relation between functional types of social support and their stress reducing function has direct relevance to clinical intervention in the context of both discharge planning and outpatient community care.

The present study takes account of the importance of situation specific measurement by comparing three composites of stressors varying in specificity

in their interactive role with functions of social support. First, an undifferentiated global index, including all stressors, ranging from daily 'hassles' to major life events, is examined. Second, four separate indices of support-specific stressors are developed to correspond to each of the four functions of social support . Third, an index of events specific to physical and social aspects of disability are developed. A greater number of stress buffering effects are expected to be found when specific and tailored social support and stress indices are employed.

A test of situation-specific functions of social support buffering stress necessitates a range of differentiated measures. Factor structures of social support have been theorized to be variant across unique contexts of stress (Wood, 1984). Consequently, a factor analysis of social support on a SCI sample will be performed to create more specific functions of social support in this context.

Method

Subjects

The subjects were 64 males and 14 females with traumatic spinal cord injuries (67% quadriplegic) who were participating in an ongoing investigation of psychosocial variables related to adjustment. Subjects were recruited from hospitals, rehabilitation agencies, and Independent Living Centers in Upstate New York. Subjects ranged in age from 17 to 68 years (Md = 26.79 years). The median age at onset of disability was 21 years and the median duration of disability was 3.33 years.

Measures

Interpersonal Social Evaluation List (ISEL). The ISEL is a 40-item measure of perceived social support with four scales (in parentheses) assessing: material aid (Tangible Support), companionship (Belonging), social comparison (Self Esteem), and guidance and advice (Appraisal).

Critical Life Events Questionnaire (CLEQ). Critical life events were collected through an 84 item self-report measure which asked respondents to recall positive and negative events they have experienced during the past six months. The method of scaling of items was adopted from Sarason, Johnson and Siegel (1978). Subjects reported the occurrence of events and recalled their feelings at the time the event occurred. Desirability ratings ranged from -3 (extremely negative) to +3 (extremely positive). The 84 items comprising this measure included 44 items from the Sarason et al. (1978) Life Events Survey (LES) and 15 from the Kanner, Coyne, Schaefer and Lazarus (1981) measure, consisting of minor, albeit cumulatively important, events described as "hassles" and "uplifts." An additional 25 events specifically related to medical and interpersonal contexts of rehabilitation and community adjustment were added to the LES. These latter events were derived from pilot interviews and scales developed by Dunn (1975) and Lawson (1978).

Composites of events were formed based on different contexts of stress considered. Two expert judges sorted all CLEQ events blindly into four categories of support-specific stressors. As a result, four categories of events were formed corresponding to Tangible (LES-T), Appraisal (LES-A), Belonging (LES-B), and Self-Esteem (LES-S) support functions, numbering 15,17, 23, and 23 items, respectively. Events were sorted into categores on the basis of the primary supportive need elicited by the occurrence of the event. Additionally, an index of disability related stressors (LES-DS) was formed from among the 25 disability related events that were added initially to the LES to form the CLEQ. Overall, six indices of stress were developed. Scores for these indices were simple frequency counts of the occurence of negative events.

Adjustment measures. The following measures were used to assess adjustment: Beck Depression Inventory (BDI; Beck, 1961), and SCI

Adjustment Scale (Shadish, Hickman, & Arrick, 1980), a 30-item scale (total scores range from 30 to 150) tailored to distress related concerns of spinal cord injury.

Procedure.

Data from this study was collected as part of a larger data set associated with an ongoing comprehensive investigation of psychosocial variables related to adjustment to spinal cord injury. Subjects were paid ten dollars for participation in the study. Interview questions were presented interactively and transcribed by interviewers in an effort to reduce fatigue among the majority of subjects with upper extremity limitations. Interviews were conducted by masters degree students in Rehabilitation Counseling and doctoral students in Counseling Psychology.

Analysis

The 40 ISEL items were intercorrelated and factored by a principal axes technique, using squared multiple correlations as communality estimates. Since the domain of social support has been theorized as a heterogeneous composite of discriminant strategies used to counteract stress (Wood, 1984), the factors were rotated to approximate an orthogonal simple structure using the normalized varimax algorithm.

The following multiple criteria were used to select the best factor solution: (a) Cattell's (1966) "scree" test, (b) factor interpretability, and (c) residual factor. A residual factor was defined for this study as one for which fewer than three loadings greater than .40 were found. These criteria were applied to each of the two through six factor solutions.

Three sets of hierarchical multiple regression analyses were used to test the stress buffering role of social support. The first set included five regression analyses involving the global stress index with each of four general social support indices. The second set included four analyses

involving specific stress indices matched with their corresponding social support indices. The third set included five analyses involving the disability specific stress index with each of four general social support indices. For each regression analysis, the indices were entered in the following order: stress, social support, and the cross-product term of stress and social support. Overall, 14 combinations of stress indices and social support scales were regressed onto the two adjustment measures, resulting in a total of 28 regression equations. In these analyses independent variables were centered by taking the difference of the values from their respective means (Cohen & Cohen, 1984).

Results

Structure of Social Support

Two through six factors were extracted and rotated to a varimax criterion. Inspection of these factor solutions showed that a residual factor emerged for the five and six factor solutions. Examination of the eigenvalues and the interpretability of the three and four factor solutions indicated that the four factor solution best represented the structure of social support among individuals with spinal cord injury. The four factor solution accounted for 45.6 percent of the total variance.

Insert Table 1 about here

As shown in Table 1, Factors 1, 2, 3, and 4 of the four factor solution were defined by 13, 8, 8, and 6 social support items, respectively. Five items failed to load greater than .30 on any factor and were eliminated. Comparison of the corresponding general and SCI-ISEL scales indicated that the factors of social support based on the sample of individuals with spinal cord injuries are similar in content to those found with able-bodied

individuals, and, as a result, SCI-ISEL factor labels were identical to those of the ISEL scales. With the exception of tangible social support, SCI factors appear to form a more restricted composite of representative items.

Insert Table 2 about here

As shown in Table 2, a moderate to high pattern of correlations was found between corresponding scales of the ISEL and SCI-ISEL, indicating that the same named scales measure similar domains of social support. The correlations among the SCI-ISEL scales were lower than the correlations among the ISEL, showing that the SCI-ISEL measures a more mutually exclusive set of social support functions. Internal consistency coefficients for the SCI-ISEL scales (Cronbach alpha's in parentheses) were: SCI-Tangible (.88), SCI-Appraisal (.69), SCI-Belonging (.79), and SCI-Self Esteem (.81). With the exception of the SCI-Appraisal scale, internal consistency estimates seemed adequate.

Test of the Buffering Hypothesis

Table 2 shows the means, standard deviations, and correlations of the social support scales (four general and four specific measures), stress indices (one global, four support specific, and one disability specific measures), and both adjustment indices. Since items overlapped among these measures, both support-specific and disability-specific stress indices were correlated highly with the global stress index. A similarly expected relationship between disability-specific and support-specific stress indices was found.

In general, the global measure of stress correlated more highly with the adjustment measures than with the disability specific and support specific stress indices. The only exceptions to this pattern were the correlations of

.42 and .44 with the LES-B scale and the BDI and Shadish, respectively. Inspection of the correlations among the social support indices and the adjustment measures show that the ISEL and SCI-ISEL scales have a similar pattern of moderate negative relationships with the adjustment measures.

Both the ISEL and SCI-ISEL were used separately in the hierarchical regression analyses. For purposes of this report, the general ISEL was matched with the global stress index. Also, those stress indices specific to support type were matched with the tailored SCI-ISEL scales obtained in the factor analyses. Since the results from the regression analysis using the BDI and Shadish were very similar, only those results for the BDI are reported.

Global test. As shown in Table 3, the first set of analyses examined whether social support functions buffer a global set of stress. Raw score regression weights were found to be in the expected direction, indicating that increases in stress covary with increases in measured depression and that increases in social support covary with a reduction in depression. The regression coefficients for the interaction terms (life events x social support) were also found in the hypothesized direction. Results of the buffering analyses showed that tangible support produced a significant interaction with stress, accounting for 3.5 percent of variance in depression. Although a significant interaction was found with tangible support, examination of the regression lines reveal that low levels of material aid have no effect on the level of stress whereas high levels of material aid have a significant effect on low to moderate levels of stress but no effect at high levels of stress. In the five regression analyses, social support accounted for 19 to 30 percent of the variation in depression.

Insert Table 3 about here

Support specific test. This analysis tests the situation specific buffering role of social support with four stress indices corresponding to each of the four functions of support. As shown in Table 4, the interaction terms in the regression equations involving tangible and appraisal support were found to be significant, accounting for 5 and 8 percent of variation in depression, respectively. In contrast, self esteem support and belonging support, while accounting for amounts of variance similar to the other support variables, failed to produce a significant interaction effect with matched stressors.

Insert Table 4, Figure 1, and Figure 2 about here

To examine the exact nature of the conditionality that exists between the BDI and support-specific stressors, three representative regression lines were calculated: (a) low levels of social support (-1 SD), (b) average levels of support, and (c) high levels of social support (+1 SD). As represented in a comparison of Figures 1 and 2, tangible and appraisal support have a widely different impact on the stress-depression relationship. High amounts of appraisal social support are shown to be an effective protection against depressive symptomatology experienced during increasing exposure to stress. This buffering effect is clearly demonstrated by varying slopes for high, moderate, and low appraisal support groups. In direct contrast to a protective buffer, Figure 1 illustrates a stress intensifying interactive effect for subjects perceiving high amounts of material aid. Increases in depressive symptomatology accompany increases in stressors related to material aid. Similar intensifying effects are found for those moderate in their perceptions of material aid, while the low social support group display

fairly stable levels of relatively high depression.

Insert Figure 3 and Figure 4 about here

Figures 3 and 4 display a series of regression lines that strongly indicate a main effect relationship between social support and depressive symptomatology. Support perceived as available in the forms of both companionship and social comparison seems to have direct bearing on the likelihood of exhibiting maladjustment, regardless of increases in experienced stress.

Disability specific test. This analysis tests whether support specifically moderates the impact of the set of stressors uniquely experienced by individuals with spinal cord injuries. Contrary to the working assumption of this investigation, no significant interactions were found with the SCI-ISEL support scales and stress related specifically to disability. A closer examination of Table 3, however, shows a nonsignificant tendency for tangible support buffering stress, with the interaction term accounting for 2 percent of the explained variance. Appraisal support, shown previously to buffer global and support specific stress indices, failed here to demonstrate a tendency toward buffering disability related stress.

Insert Table 5 about here

Discussion

In light of the advantages noted by Cohen & McKay (1984) of the use of tailored approaches to assess stress-buffering effects, it is surprising to find no stress-buffering effect among the set of analyses that employed a stress index specific to disability. On the contrary, scales including

general stressors not specific to disability yielded more stress-buffering effects. These findings indicate that the role of social support may not be to help individuals adjust to the social and physical aspects of disability, but rather to aid individuals in adjustment to the impact of a more global set of stressors that span across a variety of life situations. Such stress is buffered for individuals with a spinal cord injury through a structure of social support similar to that found in the general population. Hence, a normative pattern of adjustment is noted, despite the sizable rehabilitation literature that characterizes adjustment to spinal cord injury as an unique process.

Although relatively few interaction effects were found, the use of specific social support scales does increase our understanding of buffering effects in this context. It is also interesting to note that the impact of instrumental forms of social support (i.e., Tangible and Appraisal) was found to be dependent on the level of stress experienced, suggesting that stressors may be more amenable to attenuation when countered by these instrumental resources.

In comparison, emotional social support functions (Belonging and Self-Esteem) were found more consistently to have a direct impact (main effect) on depression and adjustment. Reflective of forms of emotional support, both the Self-Esteem and Belonging support functions may facilitate the developmental process involving restorative adjustment of the self-concept (DeLoach & Greer, 1981). These authors describe an increasing differentiation through which initial stigma associated with disability becomes incorporated into the self-state. Aspects of disability become less salient in interpersonal relationships during this developmental process. Emotional support functions may then not be as important in counteracting stress as they are in facilitating important interpersonal networks that

improve feelings of social worth and integration into the community.

The findings also provide some evidence for matching models, leading to added insight into stress-specific support functions. Among the three significant interaction effects, tangible and appraisal support functions were found to interact with stress when support-specific stress indices are used. The most notable finding was the stress intensifying effect found for tangible support when analyzed under both global and support-specific stress indices. Subjects reporting higher levels of perceived tangible support were equally responsive to stress as those receiving low levels of social support. This finding highlights the general importance of material aid for individuals who have a restricted range of functional capacities. The more stress responsive behavior shown by the high tangible support group may well be an outcome of an expectancy-value relationship in which strong initial expectancies of tangible support are disconfirmed by negative events occurring despite considerable material resources. Since tangible support has received relatively little attention in the literature, its role in adjustment has yet to be fully understood.

One drawback to the present study is its cross-sectional design; confounding relationships between support and distress cannot be explored. Secondly, the prexisting levels of adjustment may effect both the occurrence and appraisal of stressful events and evaluation of supportive resources functions. A prospective study is needed to further validate the present findings. The results do, nevertheless, suggest important clinical and theoretical directions for future explorations of the structure and role of social support and its interactive nature with stressful events experienced by individuals with spinal cord injuries who live in community settings.

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Table 1

Factor Structure of Interpersonal Support Evaluation List (SCI- ISEL)

Tangible (Alpha = .88)

4. If for some reason I were put in jail, there is someone I could call who would bail me out. (.75)

8. I have someone who takes pride in my accomplishments. (.44)

11. If I were sick and needed someonene to drive me to the doctor, I would have trouble finding someone. (.60)

13. When I need suggestions for how to deal with a personal problem I know there is someone I can turn to. (.66)

15. There is no friend I could call on to provide transportation or lend me their car or van. (.35)

16. Most people I know think highly of me. (.59)

19. If I needed a quick emergency loan of $100, there is someone I could get if from. (.75)

20. Most of my friends are more interesting than I am. (.42)

23. If I needed some help in moving to a new home, I would have a hard time finding someone to help me. (.74)

27. If I were sick, there would be almost no one I could find to help me with my daily chores. (.68)

31. If I got stranded 10 miles out of town, there is someone I could call to come get me. (.55)

35. If I had to mail an important letter at the post office by 5:00 and couldn't make it, there is someone who could do it for me. (.61)

39. If I needed a ride to the airport very early in the morning, I would have a hard time finding anyone to take me. (.61)

Note. Factor loadings are in parentheses.

(table continues)

Belonging (Alpha = .79)

6 No one I know would throw a birthday party for me. (.67)

7. If I had to go out of town for a few weeks, someone I know would look after my house (the plants, pets, yard, etc.). (.46)

9. There is someone who will give me suggestions about activities for recreation or entertainment. (.51)

10. There are several different people with whom I enjoy spending time. (.62)

17. There is really no one who I feel comfortable going to for advice about sexual problems. (.38)

18. If I wanted to have lunch with someone, I could easily find someone to join me. (.51)

22. Most of the people I know don't enjoy the same things that I do. (.50)

26. When I feel lonely, there are several people I could call and talk to. (.55)

Self-Esteem (Alpha = .81)

2. If I decide on Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me. (.53)

3. In general, people don't have much confidence in me. (.50)

12. Most of my friends are more successful at making changes in their lives than I am. (.64)

14. I don't often get invited to do things with others. (.49)

28. I have a hard time keeping pace with my friends. (.66)

32. I think that my friends feel that I'm not very good at helping them solve problems. (.45)

34. I feel that I'm on the fringe in my circle of friends. (.59)

40. I am able to do things as well as most other people. (.40)

Note. Factor loadings are in parentheses.

(table continues)

Appraisal (Alpha = .69)

1. There is at least one person whose advice I really trust. (.45)

21. There is someone I can turn to for advice about handling hassles over household responsibilities. (.59)

25. I feel that there is no one with whom I can share my most private worries and fears. (.56)

29. If a family crisis arose few of my friends would be able to give me good advice about handling it. (.35)

33. There are very few people I trust to help solve my problems. (.44)

38. If I wanted to go out of town for the day, I would have a hard time finding someone to go with me. (.35)

Note. Factor loadings are in parentheses.

Table 3
Regression Analysis of CLEQ, ISEL scales, and CLEQ X Support Interaction with BDI

Variable	b	F	R^2 change	F
CLEQ	.213	9.494*	.162	14.670**
Tangible	-2.414	21.595**	.189	21.856**
Interaction	.144	4.232*	.035	
Constant	7.131			
		R^2 = .386, F (3,74) = 15.510**		
CLEQ	.292	21.859**	.162	14.670**
Appraisal	-1.204	41.781**	.293	40.390**
Interaction	-.033	1.345	.010	
Constant	6.921			
		R^2 = .465, F (3,74) = 21.432**		
CLEQ	.210	9.706**	.162	14.670**
Belonging	-1.075	31.414**	.248	31.491**
Interaction	.021	.361	.003	
Constant	6.998			
		R^2 = .413, F (3,74) = 17.321**		
CLEQ	.223	11.671**	.162	14.670**
Self-Esteem	-1.204	39.854**	.296	40.893**
Interaction	-.022	.571	.004	
Constant	6.869			
		R^2 = .462, F (3,74) = 21.157**		
CLEQ	.214	13.391**	.162	14.670**
ISEL	-.463	63.798**	.391	65.708**
Interaction	-.002	.062	.000	
Constant	6.919			
		R^2 = .554, F (3,74) = 30.590**		

Note. N=78.
* p< .05 ** p< .01

Table 4
Regression Analysis of Support-Specific LES scales, SCI-ISEL scales, and Interaction with BDI

Variable	b	F	R^2 change	F
LES-T	.551	5.459*	.084	6.966**
SCI-Tangible	-1.790	33.977**	.263	30.145**
Interaction	.253	6.135*	.050	
Constant	7.109			
	R^2 = .397, F (3,74) = 16.214**			
LES-A	.876	10.618**	.065	5.297*
SCI-Appraisal	-1.798	41.402**	.265	29.681**
Interaction	-.622	10.455**	.083	
Constant	6.875			
	R^2 = .413, F (3,74) = 17.365**			
LES-B	.945	22.100**	.197	18.600**
SCI-Belonging	-1.327	18.637**	.167	19.681**
Interaction	.081	.296	.003	
Constant	6.934			
	R^2 = .366, F (3,74) = 14.249**			
LES-S	.281	1.808	.066	5.327*
SCI Self-Esteem	-1.181	34.842**	.298	35.180**
Interaction	.028	.090	.001	
Constant	6.966			
	R^2 = .365, F (3,74) = 14.158**			

Note. N= 78.
* p< .05 ** p< .01

Table 5
Regression Analysis of Disability-Specific Life Events, SCI-ISEL scales, and Interaction with BDI

Variable	b	t	R^2 change	F
LES-DS	.253	4.225*	.072	5.890*
SCI-Tangible	-1.637	31.743**	.302	36.117**
Interaction	.172	2.491	.020	
Constant	6.835			
	R^2 = .394, F (3,74) = 16.036**			
LES-DS	.365	9.425**	.072	5.890*
SCI-Appraisal	-1.626	32.627**	.281	32.507**
Interaction	-.049	.396	.003	
Constant	6.739			
	R^2 = .356, F (3,74) = 13.635**			
LES-DS	.297	5.194*	.072	5.890*
SCI-Belonging	-1.399	15.454**	.155	15.055**
Interaction	.083	.697	.007	
Constant	6.800			
	R^2 = .234, F (3,74) = 7.547**			
LES-DS	.218	3.066	.072	5.890*
SCI Self-Esteem	-1.170	35.040**	.302	36.093**
Interaction	-.017	.092	.001	
Constant	6.789			
	R^2 = .374, F (3,74) = 14.751**			
LES-DS	.257	5.624*	.072	5.890*
SCI-ISEL	-.565	63.646**	.436	66.519**
Interaction	.005	.045	.000	
Constant	6.804			
	R^2 = .508, F (3,74) = 25.515**			

Note. N = 78.
* p< .05 ** p< .01

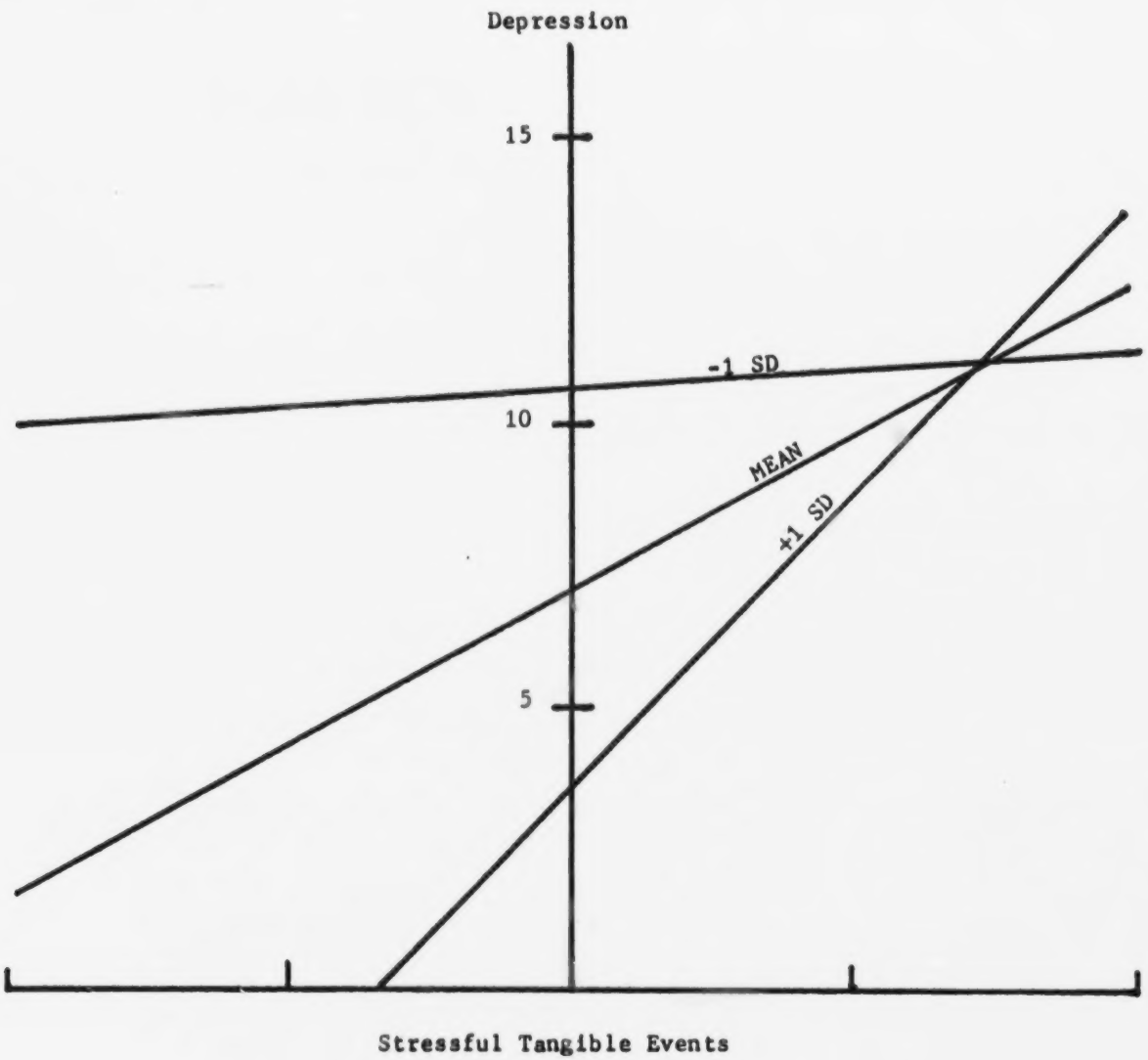

Figure 1: Regression analysis of Tangible Scale and Tangible Life Events on Depression for Three Levels of Social Support.

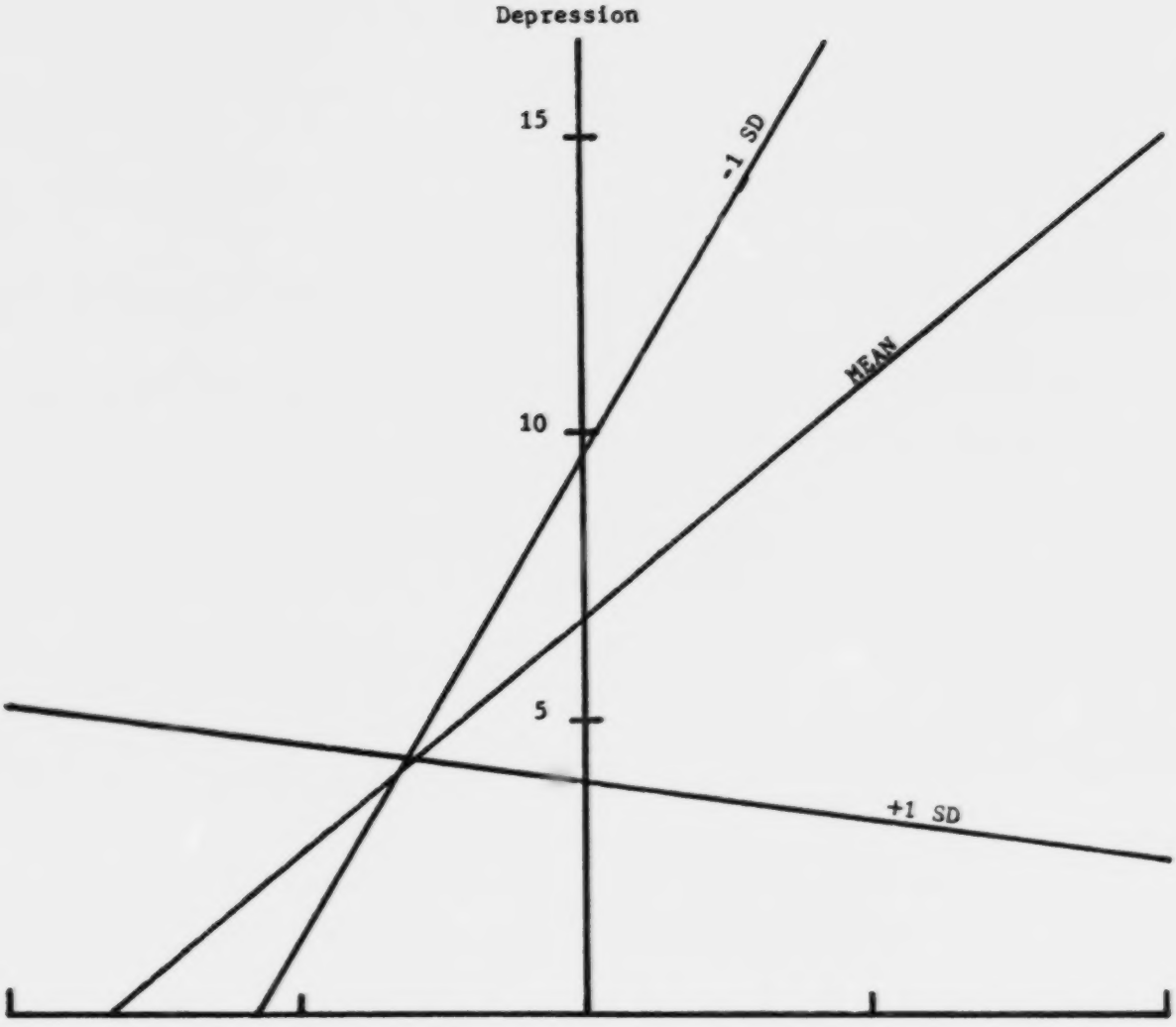

Figure 2: Regression analysis of Appraisal Scale and Appraisal Life Events on Depression for Three Levels of Social Support.

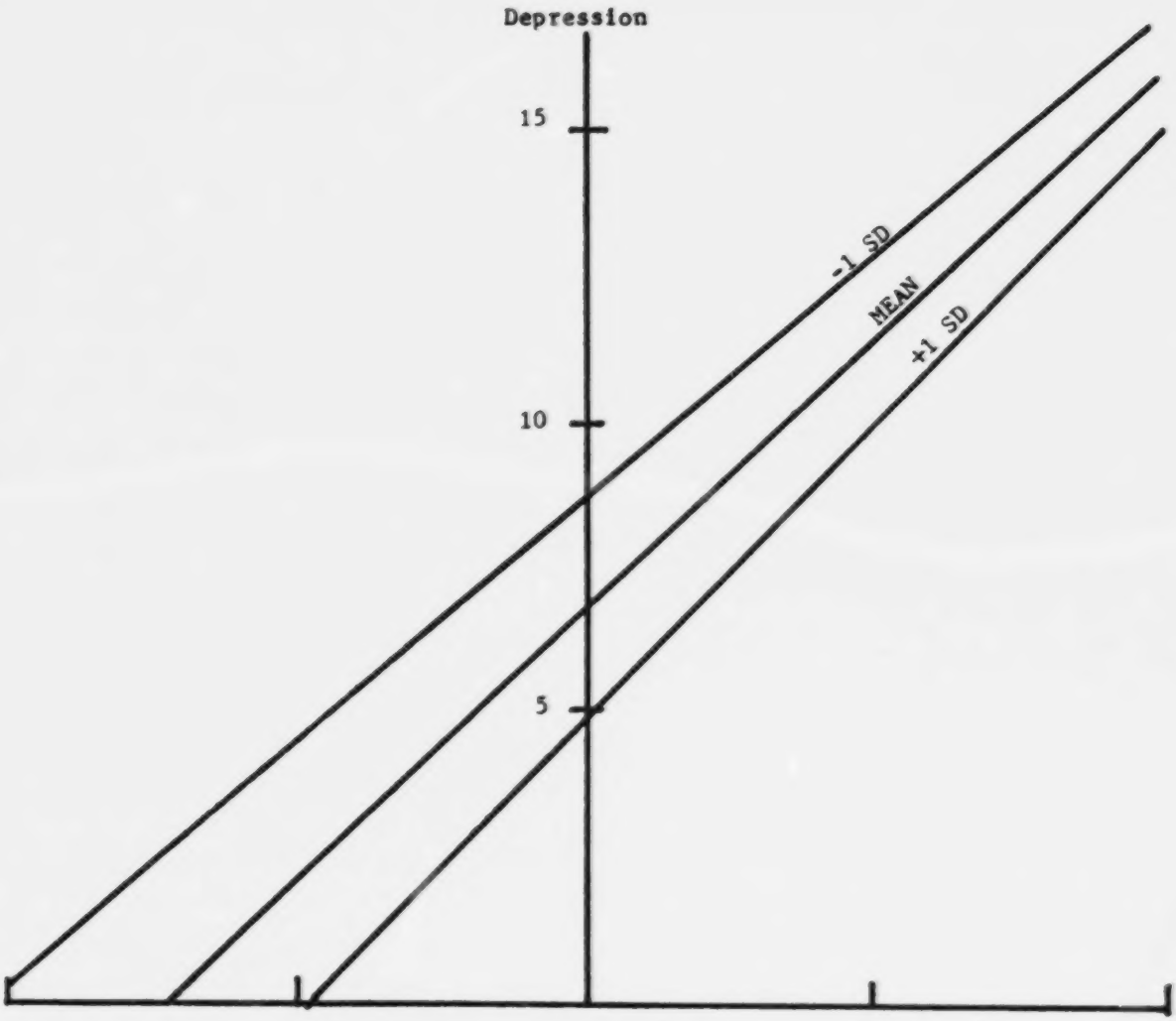

Figure 3: Regression analysis of Belonging Scale and Belonging Life Events on Depression for Three Levels of Social Support.

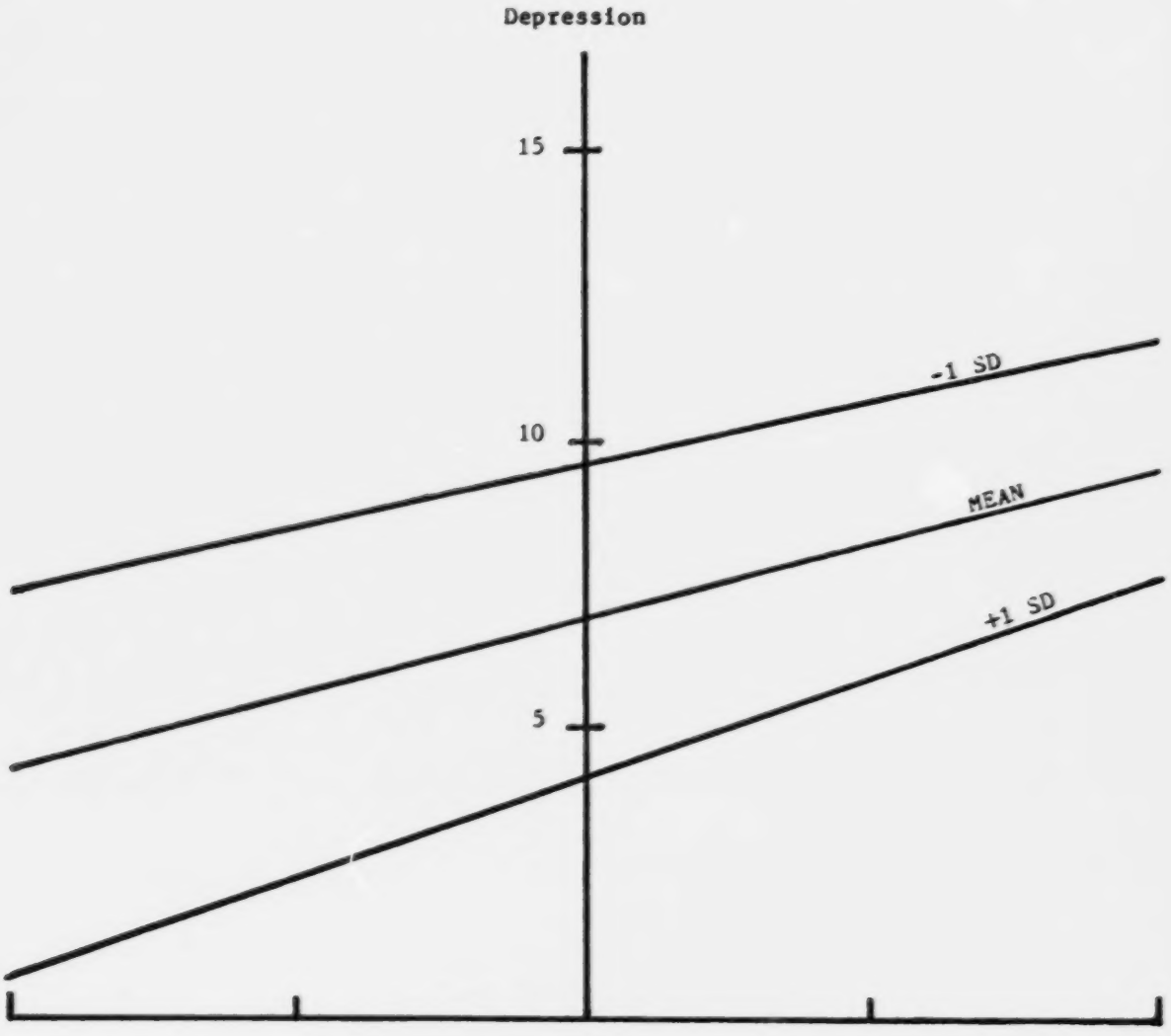

Figure 4: Regression analysis of Self-esteem Scale and Self-esteem Life Events on Depression for Three Levels of Social Support.